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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of Information unless it displays an OMB control number. Docket Number (Optional) 0315-000510/COD PRE-APPEAL BRIEF REQUEST FOR REVIEW I hereby certify that this correspondence is being deposited with the United Application Number Filed States Postal Service with sufficient postage as first class mail in an 10/776,856 02-11-2004 envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] First Named Inventor Nagaraj Jayanth et al. On\_ Art Unit Examiner 3744 Harry B. Tanner Signature Typed or printed name Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. X The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided. I am the applicant/inventor assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) Michael Malinzak / Matthew H. Szalach Typed or printed name attorney or agent of record. Registration number 43,770 / 53,665. (248) 641-1600 Telephone number attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 March 20, 2006 Date NOTE: Signatures of all the Inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*. lo lato [ forms are submitted.

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### **PATENT**

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:

10/776,856

Filing Date:

2/11/2004

Applicant:

Nagaraj Jayanth et al.

Group Art Unit:

3744

Examiner:

Harry B. Tanner

Title:

COMPRESSOR DIAGNOSTIC SYSTEM

Attorney Docket:

0315-000510/COD

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

#### PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicants request a Pre-Appeal Brief Conference and contend that there is no suggestion or motivation to modify the teachings of Sharood et al. (U.S. Pat. No. 6,453,687) with the teachings of Wiggs (U.S. Pat. No. 4,463,571), that such a combination renders the Sharood device inoperable, and further that the combination of Sharood and Wiggs fails to teach or suggest the elements of the presently pending claims.

### STATUS OF CLAIMS

Claims 1, 9-10 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharood et al. (U.S. Pat. No. 6,453,687) in view of Wiggs (U.S. Pat. No. 4,463,571). Claims 2-6 and 11-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharood et al. in view of Wiggs, and further in view of Katsuki (U.S. Pat. No. 6,158,230). Claims 8 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharood et al. in view of Wiggs, and further in view of Day III et al. (U.S. Pat. No. 4,387,368). Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharood et al. in view of Wiggs and Katsuki, and further in view of Day III et al.

## SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1 recites a diagnostic system for a compressor assembly having a compressor and a motor protector. The diagnostic system includes logic circuitry associated with the motor protector that analyzes the status of the motor protector <u>as a function of time</u> to identify a specific fault cause. Independent Claim 10 recites a method of diagnosing a compressor assembly including a compressor and a motor protector. The method includes analyzing a status of the motor protector <u>as a function of time</u> and identifying a compressor fault cause based on the analysis.

#### ARGUMENT

Applicants submit that there is no suggestion or motivation to combine the teachings of Sharood with Wiggs; that such a combination renders the Sharood device inoperable for its intended purpose; and that such a combination, even if appropriate, fails to teach or suggest a system or method that analyzes a status of a motor protector as a function of time to identify a compressor fault or specific fault cause.

Sharood fails to teach or suggest monitoring a *motor protector* of a compressor. See Response filed February 8, 2006 at pg. 7. Rather, Sharood teaches a retrofit plug for use with a refrigerator that monitors a *compressor* run time to determine if a refrigerator door has been left open.

Wiggs fails to teach a motor protector, and instead teaches a diagnostic system that monitors a high-pressure switch and a low-temperature switch to distinguish between a high pressure condition and a low temperature condition when servicing a compressor associated with a heat pump system. Further, Wiggs does not teach monitoring the status of the high-pressure switch or the low-temperature switch as a function of time, but rather discloses that the high-pressure switch and the low-temperature switch are "continuously monitored." See Response filed February 8, 2006 at pg. 7.

#### IMPROPER COMBINATION

There is no suggestion or motivation to combine Sharood and Wiggs, and certainly no reasonable expectation of success in combining Sharood with Wiggs

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as the modification of Sharood by Wiggs would render the Sharood device inoperable for its intended purpose.

Sharood discloses that if a compressor is on longer than expected and a rising temperature in a refrigeration compartment is detected, the retrofit plug may detect an open-door condition. But modifying the retrofit plug of Sharood with the teachings of Wiggs such that the retrofit plug of Sharood is able to monitor a high-pressure switch and a low-temperature switch associated with the compressor would defeat the ability of the retrofit plug to determine how long the compressor has been operating, an intended feature of Sharood's retrofit plug.

More specifically, the switches of Wiggs are either in an open position, preventing operation of a compressor, or in a closed position, permitting operation of the compressor. See Wiggs at Col. 3, Ins. 22-29 and Ins. 44-53. If the compressor experiences a fault, one of the switches may be opened to prevent operation of the compressor. Whichever switch is opened indicates the type of fault experienced by the compressor. See Wiggs at Col. 4, Ins. 4-25.

But monitoring how long either switch is in the open position or the closed position cannot be used to determine a compressor run time, and therefore is not useful in determining whether a refrigerator door is open. Monitoring the switches may indicate that operation of the compressor is *permitted*, but not that the compressor has been running for that same period of time. Thus, modification of Sharood by Wiggs to monitoring a length of time either switch is open or closed does not indicate compressor run time, thereby preventing the Sharood device from detecting an open-door condition.

No PRIMA FACIE OBVIOUSNESS REJECTION

Assuming, arguendo, that Sharood and Wiggs may be combined,

Applicants submit that the combination of Sharood and Wiggs fails to teach or

suggest monitoring a motor protector as a function of time. First, Sharood

teaches monitoring a compressor, not a motor protector. Second, Wiggs does

not disclose monitoring a motor protector of a compressor, making the

combination with Sharood inappropriate and inoperable. Third, while Wiggs

teaches monitoring a high-pressure switch and a low-temperature switch

associated with a compressor, it does not suggest monitoring the switches as a

function of time.

Applicants respectfully submit that there is no suggestion or motivation to

modify the retrofit plug of Sharood with the teachings of Wiggs and that such a

combination would render the device of Sharood inoperable. Applicants further

submit that even if such a combination is possible, Sharood and Wiggs fail to

teach or suggest monitoring a motor protector as a function of time to diagnose a

Accordingly, Applicants respectfully submit that the presently

pending claims are in condition for allowance.

Respectfully submitted,

Dated: March 20, 2006

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